

REMARKS

Claims 1-30 are pending in the present application.

Claims 29 and 30 have been newly added and depend from claim 14.

Claims 1-3 and 5-28 have been amended, for the sole reason of advancing prosecution. Applicants, by canceling or amending any claims herein, make no admission as to the validity of any rejection made by the Examiner against any of these claims. Applicants reserve the right to reassert any of the claims canceled herein or the original claim scope of any claim amended herein, in a continuing application.

No new matter has been added.

Independent claim 1 has been amended to recite "A planar implant comprising a planar support with two faces, at least one face of the support being provided with an absorbable adhesive layer which is able to adhere to human or animal tissue wherein the adhesive layer is essentially formed from at least one polymer which carries free aldehyde groups and whose aldehyde groups are able to react with nucleophilic groups of the tissue." Support for amended claim 1 can be found throughout the specification and claims as originally filed.

Claim 2 has been amended to recite "The implant as claimed in claim 1, wherein the adhesive layer has anti-infective properties." Support for amended claim 2 can be found throughout the specification and claims as originally filed.

In view of the following, further and favorable consideration is respectfully requested.

I. *At page 2 of the Official Action, claims 2, 3, 6-10, 12-18, 20-24, 27 and 28 have been rejected under 35 USC § 112, second paragraph as being indefinite.*

The Examiner asserts that claims 2, 3, 6-10, 12-18, 20-24, 27 and 28 are indefinite because claims 2, 3, 6-10, 13, 15-17, 20-24, 27 and 28 recite the phrases “preferably” and “in particular.”

Applicants respectfully traverse this rejection of claims 2, 3, 6-10, 12-18, 20-24, 27 and 28.

Claim 1 has been amended to recite, “A planar implant comprising a planar support with two faces, at least one face of the support being provided with an absorbable adhesive layer which is able to adhere to human or animal tissue wherein the adhesive layer is essentially formed from at least one polymer which carries free aldehyde groups and whose aldehyde groups are able to react with nucleophilic groups of the tissue.”

Claims 2-30 depend, either directly or indirectly, from claim 1.

Claims 3, 6, 14, 15, 22, 24 and 28 have been amended to replace the phrase “preferably” with “or” or “optionally.”

Claim 15 has been amended to recite “The implant as claimed in claim 14, characterized in that the proportion of glucose units oxidized to the aldehyde in the dextran polyaldehyde is at least 20%.” Claims 29 and 30 have been newly added and depend from claim 14.

Applicants respectfully submit that claims 2, 3, 6-10, 12-18, 20-24, 27 and 28 are clear and definite within the meaning of 35 USC § 112, second paragraph. Specifically, Applicants note that the phrase “preferably” has been deleted without prejudice or disclaimer. With regard to the phrase “in particular” Applicants note that a person of

ordinary skill in the art would be able to easily discern the meaning of “in particular” in view of the specification, the level of the skilled artisan, and other sources, including dictionaries and thesauruses. Therefore, Applicants submit that claims 2, 3, 6-10, 12-18, 20-24, 27 and 28 are not indefinite.

In view of the foregoing, it is submitted that claims 2, 3, 6-10, 12-18, 20-24, 27 and 28 are clear and definite within the 35 USC § 112, second paragraph. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

II. *At page 3 of the Official Action, claims 1-5, 8-14, 19-21, 23 and 25-28 have been rejected under 35 USC § 102 (b) as anticipated by US Patent No. 3,328,259 to Anderson.*

The Examiner asserts that Anderson teaches each and every element of claims 1-5, 8-14, 19-21, 23 and 25-28. Specifically, the Examiner asserts that Anderson teaches a planar implant according to the present subject matter.

In view of the following, this rejection is respectfully traversed.

The test for anticipation is whether each and every element as set forth is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131. The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicants assert that Anderson does not teach each and every element of presently amended claim 1. Specifically, Anderson does not teach an adhesive layer

which carries free aldehyde groups. Rather, Anderson describes a dressing for a wound comprising a cellulose derivative wherein Anderson discloses carboxy methyl cellulose and hydroxyl ethyl cellulose as possible cellulose derivatives, which do not carry any aldehyde groups. Further the Examiner's reference to col. 4, lines 44-45, Applicant's respectfully note that Anderson discloses only possible equivalents of cellulose derivatives, namely starch, casein, polyvinyl alcohol and inulin. However, none of the aforementioned compounds bear any aldehyde groups. Specifically, starch is an unoxidized polysaccharide consisting of a large number of glucose monosaccharide units joined together by glycosidic bonds. Further, inulins are a group of naturally occurring polysaccharides based on fructose monosaccharide units also joined together by glycosidic bonds. Applicants submit that neither starch nor inulin bear any aldehyde groups. Further, Applicants submit that casein is a phosphoprotein that also does not carry any aldehyde groups. Lastly, Applicants submit that polyvinyl alcohol is a synthetic polymer bearing hydroxyl groups but lacking aldehyde groups.

In view of the foregoing, it is submitted that Anderson does not teach each and every element of the claimed subject matter as required for anticipation under 35 USC § 102 (b). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

III. At page 8 of the Official Action, claims 6, 7, 22 and 24 have been rejected under 35 USC § 103(a) as being unpatentable over Anderson in view of US Patent No. 6,319,264 to Törmälä et al.

The Examiner asserts that it would have been obvious to one of ordinary skill in the art to have combined the implant of Anderson with the anti-adhesive layer of Törmälä et al. to obtain the present subject matter.

Applicant respectfully traverses the rejection of claims 6, 7, 22 and 24 because a *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, the Examiner must satisfy three requirements. First, as the U.S. Supreme Court very recently held in *KSR International Co. v. Teleflex Inc. et al.*, *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007), “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. ...it [may] be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” (*KSR, supra*, slip opinion at 13-15.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art references must teach or suggest all the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970).

Applicants respectfully submit that a *prima facie* case of obviousness has not been established because, whether taken alone or in combination, neither Anderson or Törmälä

et al. teach or suggest each and every limitation of the presently pending claims as required by *In re Wilson*.

Independent claim 1 is directed to “A planar implant comprising a planar support with two faces, at least one face of the support being provided with an absorbable adhesive layer which is able to adhere to human or animal tissue wherein the adhesive layer is essentially formed from at least one polymer which carries free aldehyde groups and whose aldehyde groups are able to react with nucleophilic groups of the tissue.”

Claims 6, 7, 22 and 24 depend, either directly or indirectly from claim 1.

In contrast, Anderson is directed to a dressing for a wound comprising a flexible body large enough to cover an open lesion as a dressing, said body containing a water-soluble plasma-soluble cellulose derivative. However, Anderson does not teach or suggest that oxidized cellulose derivatives, in particular **aldehyde groups** containing cellulose derivatives, may be employed for the manufacture of a wound dressing. Anderson merely discloses carboxy methyl cellulose and hydroxyl ethyl cellulose, neither of which bears any aldehyde groups. Further, possible equivalents for cellulose derivatives disclosed by Anderson relate only to compounds that do not bear cellulose derivatives. In contradistinction, Anderson does not describe any compounds bearing aldehyde groups at all. Therefore, Applicants submit that Anderson does not teach or suggest every element of the presently pending subject matter.

Törmälä et al. do not remedy the deficiencies of Anderson. Törmälä et al. is directed to a hernia mesh comprised from bioabsorbable polymers, copolymers, polymer blends or a combination of various bioabsorbable polymer parts. Like Anderson, Törmälä et al. do not teach or suggest that oxidized cellulose derivatives, in particular

aldehyde groups containing cellulose derivatives, may be employed for the manufacture of a wound dressing. Also in contradistinction, Törmälä et al. do not describe any compounds bearing aldehyde groups. Accordingly, Applicants submit that, whether taken alone or in combination, neither of Anderson or Törmälä et al. teach or suggest every element of the presently pending subject matter.

In view of the remarks set forth herein, it is submitted that, whether taken alone or in combination, Anderson and Törmälä et al. do not render the presently pending claims obvious within the meaning of 35 USC § 103(a). Accordingly, the Examiner is respectfully requested to withdraw this rejection.

IV. *At page 11 of the Official Action, claim 15 has been rejected under 35 USC § 103(a) as being unpatentable over Anderson.*

The Examiner asserts that even though Anderson does not teach the exact percentage of the proportion of glucose units oxidized to the aldehyde in the dextran polyaldehyde group, it would have been obvious to discover the optimum ranges of glucose units oxidized.

Applicant respectfully traverses this rejection because a *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, the Examiner must satisfy three requirements. First, as the U.S. Supreme Court very recently held in *KSR International Co. v. Teleflex Inc. et al.*, *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007), “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. ...it [may] be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design

community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” (*KSR, supra*, slip opinion at 13-15.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art references must teach or suggest all the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970).

Independent claim 1 is discussed above in regard to the previous rejection. Claim 15 depends indirectly from claim 1.

Anderson was discussed in detail above with regard to the previous rejections. As discussed, Applicants submit that Anderson does not render the presently pending claims obvious because the reference does not teach or suggest each and every element of present claim 1. Specifically Applicants submit that Anderson does not teach or suggest that oxidized cellulose derivatives, in particular **aldehyde groups** containing cellulose derivatives, may be employed for the manufacture of a wound dressing.

In view of the remarks set forth herein, it is submitted that Anderson does not render the presently pending claims obvious within the meaning of 35 USC § 103 (a).

Accordingly, the Examiner is respectfully requested to withdraw this rejection.

V. *At page 12 of the Official Action, claims 16-18 have been rejected under 35 USC § 103 (a), as being unpatentable over Anderson in view of Kirakossian et al.*

The Examiner asserts that it would have been obvious to one skilled in the art at the time of the invention to have used the teaching of Anderson in combination with the teaching of Kirakossian et al. to produce an implant as described in the present subject matter.

In view of the following, this rejection is respectfully traversed. Specifically, Kirakossian et al. is essentially directed to carriers having a surface coating of at least two layers of polysaccharides. Although Kirakossian et al. disclose an aldehyde group carrying polymer, Kirakossian et al. disclose only the employment of dextran aldehyde for the synthesis of a polysaccharide coated carrier. Accordingly, the coating of the carrier may be realized by an association reaction between a first polysaccharide layer comprising aldehyde reactive moieties and a second polysaccharide layer comprising aldehyde moieties. Further, Kirakossian et al. only disclose preferred carriers relating to particles, beads and plates alone. In contrast to the present subject matter, Kirakossian et al. do not teach or suggest an implant as described in the present subject matter. More specifically, although the coated carrier disclosed in Kirakossian et al. may be employed for therapeutic methods, Kirakossian et al. fail to teach or suggest a carrier that may be employed as an implant allowing for easier and more gentle securing in the body of a patient. Further in contrast, Kirakossian et al. do not teach or suggest that dextran aldehyde may be employed in order to form covalent bonds to a patient's tissue.

Moreover, Kirakossian et al. do not disclose or suggest the features lacking in Anderson, as discussed above. Accordingly, it is submitted that nothing in either Anderson or Kirakossian et al., whether taken alone or in combination, renders the claimed subject matter obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

CONCLUSION

In view of the foregoing, Applicants submit that the application is in condition for immediate allowance. Early notice to that effect is earnestly solicited. The Examiner is invited to contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,

THE NATH LAW GROUP



Gary M. Nath
Registration No. 26,965
Tanya E. Harkins
Registration No. 52,993
Customer No. 20259

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THE NATH LAW GROUP
112 South West Street
Alexandria, VA 22314
Tel: (703) 548-NATH
Fax: (703) 683-8396